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Edited by WILLIAM HUNTING, F.R.C.V.S.

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JOURNALISTIC ENERGY.

A correspondent writing concerning "The Policeman in Medicine" makes the suggestion that we have lost our energy and our combative instincts. The evidence he thinks sufficient to sustain this diagnosis is that our article *re* the policeman came too late, and that we have missed an opportunity—that we have let it pass like a ship in the night, and that our silence was due to an anticipation of rebuff.

Possibly our critic has been residing abroad, or has only very recently made the acquaintance of *The Record*. Anyway, we should like to know where and when the effort for progress or reform was made and we were not there. Nearly twenty annual volumes of *The Record* are in existence, and we should be obliged to anyone who would indicate the volume in which no attempt was made to urge our grievances and to point out the loss to the public and the State from employing laymen and amateurs to do veterinary work.

True it is that we have taken little part in some wild-cat schemes recently suggested. We refrained, not for want of energy, but from strong disapproval of pursuing quixotic attacks which were fore-doomed to failure, and from attempting to give practical shape to nebulous schemes impossible of attainment.

To be always grumbling and complaining seems to us to be more a sign of weakness than anything else. We have no desire to lead forlorn hopes, to usurp the place of the Council, or to dictate to an unwilling profession. We form our own opinion of things and when it seems possible and expedient we endeavour to express that opinion, with a hope that it may be acceptable to some of our readers. Shouting without thinking we endeavour to avoid.

It is just possible that our journalistic energy is subsiding. Time may ripen judgment, it certainly does not increase any man's physical energy. We confess to no feeling of approaching senility, but when we look back at veterinary serial literature it cannot be denied that the best work is to be found at the commencement of all our periodicals. They seem to get slower as they get older. When a man takes the risk of starting a journal, unless he is a publisher pushing business, he probably has some ideas he thinks of such importance that they should be made public and energetically disseminated. When he has achieved some success and seen his ideas accepted he becomes quiet. Then in course of time younger men see other directions for progress and they rush to the front.

But merely rushing is not enough. Before pushing any scheme, before exhibiting a grievance, it is just as well to be sure the scheme is a sensible one and that the grievance has a possibility of redress.

Prudence and judgment are equally as valuable as energy. We agree with "Spectator" that it would be magnificent if we all "could have done with confused thinking and act in unison," but—we are all human, and the Millenium is not yet.

TETANUS CAUSED BY A THORN—DEATH.

By HENRY TAYLOR, F.R.C.V.S., Hayward's Heath.

The subject was a favourite brown huntress, 16 years old, which had been in the owner's possession for eight years, and had during that time carried him over three hundred times to hounds.

On February 2nd I was asked to see her because she was stiff, and on examination I found her presenting symptoms of tetanus, not, however, very well marked. There was no history of any wound or injury, but the groom incidentally mentioned when I was enquiring about any wound that he had found a large thorn embedded in the outside quarter of the near hind foot, about ten days previously. It had entered the soft horn just below the coronary band and penetrated in a downward and inward direction. It was so firmly embedded that he could not extract it with his fingers, so the blacksmith was requisitioned, who by first cutting away the horn with a drawing knife and then getting hold of it with his pincers managed to get it out. However, as thorns are so common in the legs of hunters, its etiological bearing on the diseases was considered improbable, and the case classed as an idiopathic one. With regard to treatment, this was partly Iodine in the form of Lugol's solution, and partly serum.

On the first, second, third, and fourth days the mare received hypodermic injections of the iodine solution. On the second and third days she also received 10 c.c. of serum (Pasteur).

On the fifth, sixth, seventh, eighth, ninth, and tenth days she received 20 c.c. of serum. The mare got down on the evening of the tenth day, and as her condition was absolutely hopeless she was destroyed.

I was very disappointed at the result of this case, particularly after giving her altogether 140 c.c. of serum I should mention that in addition to the above she had bromide of potassium, chloral hydrate, and extract belladonna. Towards the end of the case an opportunity was presented for having the thorn examined. Dr. Foulerton, Bacteriologist to the Middlesex Hospital, London, who lives in Hayward's Heath, very kindly offering to test it for me. He reported that the thorn was put into peptone broth and heated to 80 C. for ten minutes in order to destroy any non-sporing bacteria which might be present. Then after incubating, a small quantity of the broth was injected subcutaneously into a mouse, which died within 40 hours with typical tetanus.

The thorn was larger than ordinary, and I should think quite an inch and a quarter long.

TWO CASES OF PAROTID ABSCESS IN OLD HORSES.

I record the two following cases as examples of several I have met with at different times, all presenting certain features in common.

Case I.—A carriage horse, nineteen years old. I was consulted with regard to a large swelling in the region of the left parotid, which had formed slowly, and after being persistently poulticed by the owner for about a week showed no signs of "pointing." I was not sure at first whether any pus was present, but ascertained it to be so with an exploring needle. I therefore made an incision and released from under the parotid about a quart of thin greenish-yellow fluid, emitting an abominable stench, and containing a considerable quantity of dead tissue in shreds.

I discontinued the poulticing, and had the cavity syringed with carbolic acid lotion (1 in 40). The discharge of pus and dead tissue continued for about a fortnight, but the stench disappeared in half that time, and the animal finally made a good recovery.

Case II. — A well-bred hackney, said to be twenty-four years old, and certainly loooking that age. This animal, when I first saw him, had a large swelling over the right parotid, with some accompanying diffuse œdema of the jugular and submaxillary regions.

The swelling had been present a week or more before I saw the case, but no treatment had been adopted, beyond very occasional warm fomentations.

On examining the parotid region, I found that an elliptical piece of skin immediately over the gland (about four inches by two inches in size) had undergone necrosis.

I incised this necrotic area, and obtained a quantity of thick sanguinous pus, which contained much dead tissue and emitted the same stench as in the first case. The odour may be described as similar to that so often met with in cases of retained placenta in cattle.

I syringed with carbolic lotion, and ordered frequent warm fomentations to hasten the removal of the necrosed skin, which came away in a couple of days, leaving a large granulating wound about the size of a man's hand. For the most part this was the result of the sloughing of the skin, but there was one sinus opening into the otherwise superficial wound, which ran upwards and forwards in the direction of the pharynx, and could not be followed to its source.

For about three weeks there was a discharge of thin foul smelling pus. I had the sinus syringed with a lotion of one part tinct. iodi. to twenty of water, and applied an astringent powder to the wound, which healed very slowly. Recovery, though tardy, appeared satisfactory, and the animal finally went to work. After working one day, however, symptoms of tetanus appeared, and the horse was destroyed.

Remarks.—I do not think these cases are very rare, and they present some points worthy of notice. The slow development, the absence of any tendency to "pointing," the amount of necrosis of the skin and underlying tissues, the obscurity of the cause, and the age of the horses, combine to render them, to my mind, distinct from other abscesses often met with in the parotid region. I note these two cases at the present time in the hope of obtaining some information as to the cause of the condition, which is quite unknown to me. I am just now treating another similar case in a very old pony, which I hope to soon record without the unlucky complication of tetanus to mar the sequel.

V. S.

PREVENTION OF BLACKLEG BY THE USE OF THE PASTEUR BLACKLEGINE.

Some months since one or two letters appeared in your columns from gentlemen who had had deaths occurring a considerable time after vaccination with blacklegine, and asked for the experience of other veterinary surgeons who had used this product.

I fully intended at the time to give my somewhat lengthened experience of blacklegine, but was very busy at the time and put off doing so, but having recently had some very noticeable additions to my previous perfectly satisfactory results, I now have much pleasure in recounting my experience from beginning up to the present time. I do not exactly know how many doses I have used, but no doubt Messrs. Huish and Co., have a record.

My process is to inoculate at the root of the tail (under surface) which is thoroughly washed with carbolic soap and dried, and afterwards covered with carbolic etheral soap and again wiped dry. While two assistants hold the calf firm a fold of skin is taken up and the needle containing the vaccine is held on a level with the tail and passed under the skin, leaving the vaccine in situation, no blood appearing, the stamp is then cut away, and the calf allowed to go; after the needle has been thoroughly rendered aseptic the same process is repeated. On the 4th day they should be examined to see if there are any abscess formation at the seat of inoculation, if so they require opening and washing out, the process of vaccination being repeated, as immunity is not established, should they not be examined the abscess breaks itself and the calf is liable to die from blackleg, not being immune, and the vaccine blamed for not answering its purpose.

I have done a great many with very satisfactory results, and I will record two typical cases showing its valuable properties.

A few weeks ago I was called to an outbreak in a stock of 30 calves, where two were already dead and another lame, and showing all signs of blackleg. I advised vaccination, which was performed the next day, two calves not being done as they were out at ley, every calf did well except the two not vaccinated and they died from blackleg a short time afterwards.

In another case there were ten calves, two had died, I vaccinated the rest, another calf died two days after vaccination and two became affected, one in a hind leg and another in fore leg, with the usual tumour and a crepitation distress, and with high temperature. Both calves made a complete recovery, also the rest did well, which I attributed to the vaccine.

I am now being asked to vaccinate stocks every year at farms where they have always had blackleg before I introduced vaccination. Thanking you for your space,

HERBERT BIBBEY, M.R.C.V.S.

LANCASHIRE VETERINARY MEDICAL ASSOCIATION.

The quarterly meeting was held at the Grand Hotel, Manchester, on September 6th, 1906, the President, Hy. Sumner, Esq., in the chair, and the attendance included Messrs. W. A. Taylor, Woods, Wolstenholme, McKinna, R. Hughes, Giblin, Clarkson, Holburn, Gubbin, Worthington, J. Adamson, S. Locke, G. H. Locke, Laithwood, Chorlton, Garnett, Richardson, Marshall, T. C. Edwards, Munro, Wilson, Harrison, Norbury, and Howe. Visitor: Mr. A. Munro, junr.

Apologies for absence were received from Messrs. Carter, Abson, Packman, A. Lawson, Jowett, Prof. Williams and Prof. Hobday.

On the motion of Mr. S. Locke, seconded by Mr. Taylor, the minutes of the last meeting were taken as read.

The PRESIDENT said that, with the permission of the meeting, they would depart from the order of the business as given on the agenda, and now have the paper read. This would give those members coming from a distance, and who had to leave early, a chance of taking part in the discussion.

The SECRETARY read a letter from Mr. Jowett regretting his inability to be present but enclosing his paper.

At the call of the Chairman Mr. Wolstenholme kindly consented to read the paper.

EQUINE SCABIES.

By WALTER JOWETT, M.R.C.V.S.

Mr. Chairman and Gentlemen,—When requested by your worthy President to provide for the purpose of discussion a paper on "Some Contagious Skin Diseases of the Horse," I consented, intending at the time to include both Scabies and Ringworm in my essay, and perhaps mention "Grease" and one or two other diseases. However, upon commencing the task I found the subject of Scabies alone more than sufficient for one paper and consequently I have dealt only with that subject.

In the equine species Scabies—or to use a common term "Mange"—is a serious and highly contagious malady.

The horse is subject to three forms of mange, namely, the Sarcoptic, the Psoroptic (or Dermatodectic), and the Chorioptic (or Symbiotic), but here only the two forms first mentioned will be dealt with. Symbiotic mange is of less importance, it occurs on the legs of the coarser bred horses, as a rule below the knee and hock, and may be combated without difficulty.

In contrasting Sarcoptic with Psoroptic acariasis we may say that whilst the former is the more serious disease, the latter is by far the commoner. It is not usual to find more than one form of mange co-existent on the same subject, but I have occasionally discovered both the Sarcopt and the Psoropt on the same host, and one would not be surprised to find the Symbiot living on the legs and the Psoropt or the Sarcopt on the body of the same horse.

One reason why Sarcoptic Scabies is a more serious disease than Psoroptic depends upon the habits of the causal parasite, for whilst the female Sarcopt *burrows* into the epidermis of its host there to deposit its ova, the Psoropt (and the Symbiot) live merely on the surface and never burrow into the skin. Acaracides placed upon the surface of the skin will reach the Psoropt without difficulty, but the Sarcopt is protected by the burrow in which it has taken up its residence and is not affected by many ordinary mange dressings merely placed upon the surface of the skin. Another reason why Sarcoptic mange is the more serious disease is that it spreads from the primary focus with extraordinary rapidity, that is when contrasted with the other forms of mange—this will be referred to later.

Essential cause.—I need hardly say that the essential cause of mange is the presence of one or other of the above mentioned mange parasites. As a result of the presence of these parasites there is produced dermatitis, manifested by redness, loss of hair, thickening of the skin, the formation of crusts (composed of epithelial scales and inflammatory exudate), and an intense pruritis. In addition we may observe secondary changes resulting from the constant rubbing and biting to which the animal subjects itself—these changes consist of the formation of pustules and abrasions, sores, and so forth.

It may not be without interest to enquire into the exact *cause* of this intense pruritis—surely one might say, it is owing to the mere presence of the parasites moving on and pricking the skin. In the case of the Sarcopt one might be excused for expressing a decided opinion that the cause of pruritis, here at any rate, is owing to the parasite wriggling and burrowing in the epidermis. Now, strange to say, it is said these parasites are hardly felt at all when moving on the surface of the skin, neither does the mere burrowing of the Sarcopt produce any appreciable irritation. The itching is induced by an irritant principle which the parasite deposits in the skin of its host. By crushing acari and inoculating animals with the fluid so obtained, Bourguignon unfailingly produced a vesicular eruption, and in every case the irritant effect remained strictly localised to the point of inoculation.

It was proved by Gerlach that the Psoropt secretes the most acrid fluid and the Symbiot the least, the Sarcopt in this respect he placed midway between the other two.

This observation corresponds with the clinical signs of the malady, for whilst both Sarcoptic and Psoroptic mange are attended with intense pruritis, yet it is the horse affected with the last mentioned form which shows the itching in greater degree, indeed often to desperation.

Accessory causes.—Regarding these, it is sufficient to remark that anything favouring the transference of the acari from one animal to another should be grouped under this heading. The most common media of transmission are horse blankets, harness, saddlery, stall divisions, railway horse boxes, straw, litter, and forage, the shafts of vehicles, grooming and stable utensils, etc.,

Vitality.—As to the length of time the parasites may live apart from their hosts—it is impossible to state with certainty any definite period. Although data on this point would be of value to the clinician, there still appears room for further experiments in this direction.

The eggs of the Sarcopt of the horse have been seen by Gerlach to hatch out four weeks after their removal from a horse:

In general it may be said that the vitality of the Psoropt exceeds that of the Sarcopt, for Gerlach found that whilst the Sarcoptes equi died in from 12 to 14 days when placed in a glass vessel in an inhabited stable, the Psoropt lived 20 to 30 days when placed under the same conditions, and even after six or eight weeks when subjected to moist warmth revived, and presumably would still have been capable of giving rise to Scabies if placed on a suitable host. From these experiments we see the necessity of subjecting to the action of an acaricide *everything* which may have been in contact with a mangy animal. If we simply treat the subject and neglect its surroundings our labour will all be in vain.

To show how quickly the different causal parasites of Scabies multiply when placed under favourable conditions Neumann (after Gerlach) quotes the following figures :—

1. Each female Sarcopt *on an average* produces fifteen individuals, ten females and five males.
2. It requires fifteen days for one generation to succeed another and to arrive at maturity.
3. He estimates that from one male and one female Sarcopt there may be produced in a period of three months the enormous number of one million, five hundred thousand descendants.

This estimate is based on the following calculation :—

1st Generation after	15	days—10	females	and	5	males	
2nd	„	„ 30	„	100	„ „	50	„
3rd	„	„ 45	„	1,000	„	500	
4th	„	„ 60	„	10,000	„	5,000	„
5th	„	„ 75	„	100,000	„	50.000	„
6th	„	„ 90	„	1,000,000	„	500,000	„

This will give some idea of what one may expect to find on a mangy animal neglected and uncared for for three months.

Life History.—Before proceeding further it may be not altogether without interest to consider very briefly the mode of life of a Sarcopt and a Psoropt.

Taking first the Sarcopt, we find it is the female which is the exciting agent at the commencement of the process. Immediately after fertilisation she penetrates into the deeper layers of the epidermis to deposit her ova, it is said that she forms a burrow very quickly—within 15 to 30 minutes in fact. At the point of penetration into the epidermis there forms a papule, but one must not expect to find the parasite immediately under this—she is always situated at the other end of the burrow, *i.e.*, at the blind end. These tunnels vary in length —$\frac{1}{4}$ to $\frac{1}{2}$ an inch, but they may be considerably longer, they take a tortuous course and contain, in addition to the female acarus at the blind end—ova, larvæ, and excremental matter. The parasite deposits an ovum at different stages in the burrow, consequently the oldest eggs are near the surface of the epidermis, the young ones in the deep layers.

From the ovum there hatches out in due course a six legged larva, and this is nourished in the gallery for some time, and is even believed to moult here before making its exit. Says Neumann "It is not certain whether the nymphæ and pubescent females also live in the galleries, in any case copulation takes place beneath the crusts and epidermal scales," that is, on the surface of the skin.

On the surface of the skin then one may discover among the crusts larvæ (hexapod), nymphæ (octopod) no sexual organs, and mature parasites with sexual organs fully formed. In addition to these are found ova and empty shells.

The Psoroptes, as already observed, do not burrow into the epidermis, they live on the surface of the skin in colonies amongst the crusts which have formed as a result of their presence. In examining the edge of one of the crusts there is no difficulty in discovering parasites in the different stages of development—ova, empty shells, larvæ, nymphæ, and adult males and females. The parasite (psoropt) is larger than the Sarcopt and can just be perceived with the naked eye.

Symptoms.

Into this portion of the subject it is not my intention to enter at all fully. As veterinary surgeons we are all familiar with the general signs of Scabies and I will not weary you by enumerating them.

It may be said that as a rule Sarcoptic mange commences about the withers and from there extends to the neck, sides of the thorax and abdomen, inside the fore arm and thighs. Usually it does not invade the extremities.

Psoroptic acariasis starts along the upper surface of the neck under cover of the mane and often also at the base of the tail. This form of mange progresses slowly, and seldom invades the entire body ; as before observed the parasites tend always to remain in colonies, *i.e.*, they are extremely sociable. Naturally, in the process of grooming, or by rubbing, they may be transferred to any portion of the skin, but wherever deposited they are not inclined to wander far away. Not so Sarcoptic scabies—this form commences slowly, but in contrast to the Psoroptic, once it is fairly established it spreads with great rapidity. Says Neumann "While at the end of a month the Sarcoptes will have spread to the most distant parts of the skin, the Psoroptes at this time will be still located at the upper part of the neck or base of the tail where they had established their first colony."

Diagnosis.

The pathognomonic symptom of scabies consists in the discovery of the causal parasite, and this, as a rule, is not a difficult matter. It suffices to take a small portion of the crust—a deep scraping—soak this in a 10 per cent. solution of caustic potash, tease the material with needles on a slide, and examine under the low power of the microscope.

In Psoroptic mange if one has taken care to examine the *edge* of one of the crusts the parasites can hardly be missed ; they are often present in one field of the microscope in considerable numbers.

In Sarcoptic mange they are not usually so abundant, but if one has taken a fairly deep scraping and allowed sufficient time to elapse for the caustic solution to dissolve the epithelial scales and debris, which obscure the acari, there is usually no difficulty in detecting their presence.

It may be observed that instead of merely soaking the crusts in potash solution one may boil them therein and by this means hasten the process.

It may not be out of place to introduce here a table giving the main distinguishing features between the Sarcopt, Psoropt, and Symbiot :—

	Sarcopt.	*Psoropt.*	*Symbiot.*
Body.	In shape rounded.	Oval.	Oval.
Rostrum.	Short, horseshoe shaped, 2 lateral cheeks.	More lengthened, no lateral cheeks	Blunt, as wide as long.
Legs.	Four anterior only attached to margin of body. Four posterior, to ventral surface of abdomen, consequently when parasite is viewed from	All attached to margin of body and therefore *all* readily seen when parasite is viewed from the dorsal surface.	All attached to margin of body and all easily seen from dorsal surface.

	Sarcopt.	*Psoropt.*	*Symbiot.*
	dorsal surface the two hind pairs of legs are almost concealed beneath the body		
Tarsus.	Some of legs end in bristles others in a pedicle with a little sucker at its end. Pedicle is simple & unjointed	Suckers are at end of a three jointed pedicle.	Suckers at end of a simple unjointed pedicle

I trust I may be pardoned for introducing a table of a nature so elementary, the object is simply to remind us of the most important distinguishing features between the three varieties of mange parasites. Of course the table is far from being complete.

Is Scabies of the Horse Transmissible to any Animal of Other than the Equine Species?

From my own experience I can answer the question in the affirmative. On three different occasions have I seen Sarcoptic scabies of the horse and mule transmitted to men (grooms and horseshoers) brought in contact with mangy horses and mules. It appears that both Sarcoptic and Psoroptic mange of the horse may be transmitted to the ox, but Neumann casts doubts on this assertion, and further affirms that mange of the horse is not communicable to the sheep, goat or dog. Neither is mange of the sheep or ox communicable to the horse. According to Zürn (quoted by Neumann) the sarcopt of the dog can be conveyed to the horse.

Treatment.

It has fallen to my lot to have to deal with large numbers of mangy horses. In South Africa during the years 1900-01-02 the disease was extremely prevalent amongst horses, asses and mules. Psoroptic scabies was the form generally encountered, although the Sarcoptic variety was also met with. During the first period of my experience with these mangy animals they were all picketed in the open. However emaciated (and some of them *were* emaciated) they were not allowed blankets, and of course had to lie on the bare ground. They had nothing to rub against, and in fact whilst undergoing treatment they contaminated nothing but the leather head stall and rein with which they were fastened. The enclosure in which these "mangy" animals were picketed was divided into three portions, all kept quite separate and each portion had its own attendants.

The first contained the mangy animals (horses, asses, and mules): as fresh cases arrived at the depôt they were drafted into this enclosure. After being clipped and dressed they were transferred to the second enclosure, and in this detained until apparently cured, when they were transferred to the third or "cured" portion of the enclosure. In this last portion the animals were detained (under observation) for a few days, if they evinced no further evidence of scabies they were finally drafted out with other horses from the depôt for duty, if on the other hand they showed any further sign of mange they were sent back to the second enclosure to be re-dressed with an acaricide. All grooming utensils, at the end of the day's work, were thrown into tubs containing Jeyes' fluid, and remained there until next morning when they were removed.

The actual treatment of the mange cases was conducted at some distance from the depôt. As a matter of routine all mangy animals were first clipped (not just the affected patch but the entire body) and the clippings were carefully burned. After clipping one subject the machines were placed in paraffin oil for a few minutes before being used on another. Next the clipped animal was dressed with soft soap, and washed over the entire body with warm water containing either Jeyes' fluid or Izal. During the process of dressing, one man vigorously used a brush on the patient whilst another poured on the solution. This treatment was of course only carried out on sunny days—but most days are sunny on that Continent (Africa). By the time the horses had trotted back to the depôt they were almost dry again. In the course of three or four days they were again washed and re-dressed. Two or three of such dressings sufficed in many cases, but for the worst, treatment was continued every three days or so until cured. All animals undergoing this treatment were placed on a liberal diet and received exercise.

Now most veterinary surgeons agree that it is desirable to use a greasy preparation as a "mange dressing" and undoubtedly this is the best line of treatment, but in Africa one could not adopt it for animals living in the open—it was found that blistering of the skin invariably followed such treatment.

In other depôts I had experience of dressings composed of paraffin or paraffin, oil, soap and water, and after clipping this was the regular dressing for "mange" and "ringworm" cases. This line of treatment was of course effectual, but the paraffin has an irritant effect on the skin, especially if vigorously applied or oft repeated. In many cases one or two dressings sufficed—this of course was for ordinary cases.

In general, *for the treatment of Sarcoptic Scabies* I consider it necessary to make use of an oily dressing. Personally, I favour Kerosene and oil if carefully applied, or the Alkaline sulphur ointment or liniment (not the sulphur ointment of the B.P.—this is not nearly so effectual as a combination of Sulphur and Pot. carb. with lard or oil). In using oily preparations only half the body should be dressed at one time otherwise one may cause interference with the cutaneous function and give rise to serious complications. In every case one should first clip the patient, and the clippings must be carefully burned. Next wash with soft soap and water, then, after drying, dress with the selected acaricide, and repeat the dressing at the end of three or four days in order to kill any larvæ hatched out after the first dressing. Treatment should be continued on these lines until one is satisfied that the disease has ceased to exist.

I need hardly say that on the first suspicion of Scabies the affected animal must be isolated and its harness, and in fact everything that may have been in contact with it, thoroughly disinfected; the litter and bedding should be burned, and the stall or box disinfected by *spraying* the walls, floor, hay-racks, mangers, and in fact every portion of it with a solution of Izal, Jeyes' Fluid, or Carbolic acid (five per cent). Afterwards limewash thoroughly (not forgetting the floor.)

For the harness, the leather and metal work should be scrubbed with a five per cent. Izal or Formalin solution, then dried and oiled. The lining and stuffing of saddles and collars (if serge lined) should be ripped out and burned, the leather work washed, disinfected, and afterwards re-lined. Blankets, grooming and stable utensils can be placed for twenty-four hours in a solution of Izal or Jeye's Fluid. The cart shafts or pole should not be neglected, but dressed also with some disinfectant. During the continuance of the treatment, and for two or three weeks after cessation of treatment, the use of blankets should be prohibited, and likewise bedding.

Doubtless there are other details which will readily occur to the veterinary surgeon when actually dealing with an outbreak of mange. Here I have attempted

merely to give a brief outline or sketch of the subject, even this I fear has been but imperfectly accomplished.

In conclusion, I would emphasize the fact that in dealing with this disease half measures will not avail, the treatment must be thorough, and by the treatment I mean treatment not only of the patient, but also of everything that has been in contact with him. Only by such measures will one eradicate from a stud of horses this most troublesome disease.

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A Manuel of Veterinary Hygiene.—By Col. F. Smith, C.M.G., F.R.C.V.S.

DISCUSSION.

Mr. SUMNER expressed regret at Mr. Jowett's absence, notwithstanding Mr Wolstenholme's acceptable reading. Mr. Jowett looks upon the disease from the point of view of the Indian Civil and Army veterinary surgeon, but they who were face-to-face with an outbreak of "itch" in working horses found it an exceedingly difficult matter to deal with. In Liverpool the psoroptic itch was most prevalent. As regards dressing, paraffin had been tried with varying success. Used in solution of about one in four it was found to be too severe, but when reduced about fifty per cent. it gave much better results. Personally he found that what cures itch in one ansmal is useless in another, so that they could not depend upon one dressing. Itch was also more difficult to exterminate in certain colours of horses (roan, for instance) than in others.

Mr. LAITHWOOD said he knew little about the contagious form of itch. What they got in the country principally was the symbiotic form.

Mr. GARNETT did not care to discuss the paper in the absence of Mr. Jowett, but speaking in regard to the points mentioned by previous speakers he would say that the first thing to be done was to find out the form of mange to be deal with, which is not difficult. After obtaining a scraping of the scurf on the skin and placing it on glass, if they found certain short hairs which are invariably to be found on these parasites in whatever state they may be, they could almost be certain of the form of mange without using any solution at all. Like Mr. Laithwood he had come across more of the symbiotic than any other. That form spreads all over the body and moves much quicker than the other varieties. It is, however, the easiest form to cure. He would clip the legs, give a dressing of soft soap for about half-an-hour, then thoroughly scrub, and afterwards apply some tarry preparation. This done twice in the first week and once a week following would almost invariably cure.

Mr. WOLSTENHOLME thought much of the infection came from the litter, and that if it were changed a more rapid recovery would take place. The cases he had seen were chiefly sarcoptic. Single cases could be easily dealt with, but where there was a large number of horses it was more difficult to prevent re-infection. This might arise from the use of nose-bags, whips, rugs, etc. Another point also occurred to him—that the lad at the smithy would ride the horses he had to take home, and this would be conducive to spreading the disease. He believed the epidemic in Manchester had been largely sarcoptic. To anyone whe did not frequently use the microscope the disease was not easy to diagnose by this means. With respect to the sarcoptic and psoroptic forms they were not difficult to discriminate after once being seen, because the sarcoptic parasite is much the smaller.

Mr. WOODS believed the difficulty of curing an outbreak of mange to be in inverse ratio to the number of animals affected. Where there was only one horse it could be cured without difficulty, but where there were thirty or forty horses affected in a stable of about eighty there was much difficulty, especially if they wished to keep the horses working. The trouble arose principally from re-infection. As regarded dressings, he thought any of these would effect a cure if persisted in. It was not safe to rely upon a single dressing, but if used at least twice with about a week's interval, and taking the necessary precautions to prevent re-infection from the harness, stall, litter, etc., they would be assisted in stamping out an outbreak of mange. There should be no difficulty in determining correctly the life history of the parasites under consideration.

Mr. HOLBURN remarked that since the Parasitic Mange Order had come into force in Manchester he had had considerable experience in regard to the diagnosis of the disease, and also as to the manner in which various veterinary surgeons treated it. The majority of cases in Manchester were of the sarcoptic form, and this led him to think there was an erroneous opinion as to the severity and danger of this mange. His experience under the Mange Order tended to show that sarcoptic mange was not difficult to cure if attacked early. Re-infection had to be guarded against, and much trouble had been caused by cabmen using rugs, blankets, etc., in an unclean condition. Their horses had got better, and in a few weeks time were bad again, having been re-infected. There had not been many cases of symbiotic mange reported in Manchester.

Mr. R. C. EDWARDS expressed his belief in the old-fashioned dressings such as sulphur and oil, he also gave a little medicine, believing that if a horse was healthy the parasite would not live on it. He also believed in rigorous limewashing of the stables as a preventive measure.

Mr. FAULKNER agreed with previous speakers that with regard to Manchester the particular form of scabies to be dealt with had been the sarcoptic. In dealing with a large stud he had not had much difficulty, because there were spare horses and means of isolation, nor had he any difficulty in dealing with a single horse. The cases he had difficulty with were those belonging to carriers, cab proprietors, and others who had to depend on their horses for a living. First of all the owner had to be made acquainted with the requirements of the Manchester Mange Order, which required them to give notice that they had mange on their premises. This advice would often be ignored because it meant that the horses would have to be kept in. In these cases it meant treatment and work at the same time, consequently the disease kept about for an indefinite period. He had in mind one particular stud of twenty-five horses which had been cleared of disease for six months and then re-infected. The owner did not report the fact that he had two or three cases because he dreaded lest he would be told his horses could not work, or that he would be advised to report to the local authority. He thought the old remedies to be as good as the modern ones, and in his experience the old fashioned oil, sulphur etc. were successful. A new remedy that had been considerably used during the last few years was mercurial soap, the cleansing properties of which were good and proved useful in the treatment of mange.

If the public could be got to assist when there is an outbreak of contagious or infectious disease, and enable the veterinary surgeon to conform to the regulations, it would make matters easier and the spread of infection could be arrested. There was this difficulty always to contend with in dealing with small owners.

Mr. GARNETT said in respect to the treatment of psoroptic mange, any of the dressings which are found

effective in treating sheep should be tried. The parasites were identical, whether they could be traced from one or the other, and a couple of dressings of sheep dip would be equally effective with the horse. Any of the scheduled dips would do.

Mr. HARRISON related his experience with a number of horses coming back from South Africa. These horses were in very bad condition and infected many of the men, who had to be sent into hospital. What impressed him at the time was that for about three weeks after treatment the horses appeared to be doing well, but at the end of a month there was a further outbreak. No doubt much of the re-infection is due to carelessness in handling, but more probably to the eggs of the parasite which could not be destroyed.

The treatment adopted was the old fashioned one of sulphur, and oil of tar. He used the cheapest mineral oil he could buy, which contained a considerable amount of paraffin, and he added a small amount of acetic acid.

Mr. SUMNER pointed out that no expression of opinion had been given with regard to itch in certain breeds. Roan horses appeared more susceptible to infection. Also it was difficult to eradicate the disease from aged horses.

Mr. WOLSTENHOLME thought there were a number of cases which defied any treatment, and believed that either the mange parasite, or the mange parasite combined with heroic treatment, could bring about such an amount of dermatitis as to be sufficient to kill a horse; and anything like ague or other debilitating condition which was present at the outbreak of the disease would contribute to that effect. He was afraid they did not fully realise that the skin is a very important organ of the body, and if a certain amount of it was interfered with extra work would be thrown upon the internal organs, and there would be continual malaise, frequently ending in death. It was not possible to put a dressing upon a horse so as to destroy the eggs of the parasite, for, like everything else in nature, they were well protected; they could, however, be dealt with when emerging from the skin.

Mr. GARNETT remarked that if a dressing was applied properly to any mange parasite that parasite would be killed. A number of chronic cases of mange was due to the dressings which irritate the skin to such an extent as to render it almost incurable.

Mr. HOWE agreed that much of the irritation of the skin is caused by the friction of rubbing. A dressing which he used was a preparation of sulphur and lime boiled together. Sulphur in soluble form acted directly upon the parasite without unduly interfering with the action of the skin.

A vote of thanks was unanimously accorded Mr. Jowett, on the proposal of Mr. Wolstenholme, seconded by Mr. Taylor.

NOMINATIONS.

Mr. H. E. MARTIN, M.R.C.V.S., Alderley Edge, was nominated by Mr. Taylor, and Mr. A. MUNRO, JUN., M.R.C.V.S., by Mr. Holburn.

ANNUAL REGISTRATION FEE.

Mr. G. H. LOCKE submitted a letter from the Central Veterinary Medical Association enclosing a resolution proposed by Major Butler, and approved by that Society "that the Royal College of Veterinary Surgeons be invited to consider the advisability of imposing an annual registration fee."

Mr. SUMNER said the matter was open for discussion if the meeting thought fit. They were not asked to give an expression of opinion. To his mind it opened up a principle which was quite out of order in the present condition of their Charter. The Royal College had not power to tax its members, who were free members of that body corporate. It is suggested that the time is drawing nigh when a new charter will be required to adjust certain matters which are now open to dispute. If the subject was discussed now it might be of service to members of the Council to know the feeling of the profession as to whether it would be agreeable to suffer taxation or not. If their finances were in a bad way it was not merely a question of registration but they must cut the coat according to their cloth, and consider the best ways and means of reducing expenditure.

Mr. WOLSTENHOLME thought the Council of their profession ought to survey the position and give them a lead in the matter. It was not for the profession in the first place to discuss the new position and propose a remedy.

Mr. GARNETT had his own personal views on the matter, and these views had been forced upon him by the condition of affairs found out in the Council. There was no doubt they were doing fairly well financially at the present time, but he thought members of Council would admit that more might be done for the profession if their financial condition was more secure. They could not undertake prosecutions, proper Parliamentary duties, nor enforce their powers on account of expense.

Two ways of increasing their funds had been suggested, firstly, by increasing the fees, which he did not agree with, and secondly by a tax on each member. He agreed that no Parliament would make payment retrospective, but was there any reason why the poorest veterinary surgeon should not pay, say, ten shillings a year to the R.C.V.S. They could not tax themselves, that would only apply to future members, and a small tax would in the future be a great boon to those who subscribed. Many of the existing members would, no doubt, subscribe.

Other points will have to be considered, in fact certain cases will be decided during the next few months which will have a considerable bearing on the situation. There were other reasons that led him to think a new Charter would be required in the near future in order to protect their own interests.

Mr. RICHARDSON moved that steps be taken for an annual registration fee to be imposed. This was seconded by Mr. Garnett.

Mr. FAULKNER moved as an amendment, that the subject be brought before the next meeting for further consideration. It was a very important question and required careful consideration.

Mr. TAYLOR seconded the amendment.

Mr. RICHARDSON suggested that perhaps it would be more profitable if someone would prepare a paper on the subject, giving a statement as to the financial position and the advantages to be derived from taxation.

Mr. WOLSTENHOLME said they might also discuss the other side of the question, and see how much could be done by economy.

Ultimately the proposal of Mr. Richardson was withdrawn and that of Mr. Faulkner, seconded by Mr. Taylor, was carried: "That the matter be brought up for further consideration at the next meeting and that Mr Garnett be invited to open the discussion."

CORRESPONDENCE.

The SECRETARY read a letter from the relatives of the late George Morgan, F.R.C.V.S., thanking the Society for their letter of condolence.

Letters were submitted from the Secretary and Solicitor to the Royal College of Veterinary Surgeons with regard to inspectors of the Royal Society for the Prevention of Cruelty to animals giving evidence as expert veterinary witnesses.

The PRESIDENT asked that each member, on becoming acquainted with such a case should report as fully ar possible to their Secretary who would bring the matter before the Council.

Mr. G. H. Locke desired to receive instructions as to the most suitable place to convene a meeting of delegates in regard to Parliamentary registration.

Mr. Garnett proposed, and Mr. S. Locke seconded, that it be left to the Secretary to arrange for a meeting to be held in London during the first week in October. This was carried.

Report of Delegate to Public Health Congress.

Mr. President and Gentlemen,—I duly attended the Congress of the Royal Institute of Public Health held at Cork on June 27th to July 3rd, 1906, and beg to submit a brief report of the proceedings. The business was carried on at Queen's College, Cork, and divided into the usual sections, conferences, and meetings, one being devoted to veterinary inspectors, and I am sorry to say was very badly attended, not more than twelve being present, and for some reason or other only the President, Mr. Wallis Hoare, represented the local practitioners.

Professor Windle delivered the opening address to the Congress, emphasising the fact of Ireland's poor condition in public health matters, and the increase of tuberculosis and insanity in Ireland, and urged the general public to keep an eye on Health Committees, to aid in promoting more healthy and sanitary conditions.

I attended principally the Veterinary Section. Mr. Hoare in his presidential address called attention to the necessity of veterinary surgeons being engaged in Public Health work, particularly in the inspection of meat and dairies, and in the suppression of diseases communicable from animals to man. He hoped the meeting at Cork would stimulate the apathy of municipal authorities to recognise the importance of improving the standard of meat and dairy inspection and to encourge the erection of public abattoirs.

In addition to the openiug address several papers were read at this section, viz.:

Prof. Mettam, of the Royal Vet. Coll., Dublin, submitted a paper on "Diseases of the Udder and the Milk Supply," and pointed out the diseases with which the udder is frequently affected. Prof. Williams opened the discussion and several others took part.

Mr. Watson, Veterinary Inspector for Dublin, read a paper on "Meat Inspection in Dublin," and dealt principally with regard to the importation of dressed carcases from country districts, and the necessity for having further powers to deal with them. The discussion was opened by Mr. Holburn, of Manchester, and amongst others that took part were Sir Charles Cameron, of Dublin, and Mr. Cameron, of Leeds.

Mr. W. Cargill Patrick, F.R.C.V.S., of Mullingar, read a paper on "Anthrax," and remarked upon the increased frequency of the disease among animals and attributed the cause to the use of foreign cake and corn in feeding animals. Mr. Winter, of Limerick, opened the discussion that followed.

Two papers were submitted on the "Inspecting of Stables and Dairies in Ireland" by Mr. J. Kelly, M.R.C.V.S., Dublin, and Mr. Howard, of Ennis. Both papers argued the importance of more vigilant inspection of all animals kept in large cities, one saying cats, dogs, and fowls should be included; the two former frequently transmitting sore thaoat and diphtheria to children.

In addition I attended an impromptu discussion on "Redwater in Cattle," opened by Prof. Mettam; also a splendid lecture on "The *rôle* played by Animals in the Causation and Transmission of Disease," by Prof. Sambon, and illustrated by coloured diagrams, lantern slides etc. It was a most interesting and instructive lecture, dealing principally with parasites, etc.

The social side was typical of real Irish hospitality, and terminated with a trip to Killarney, which was most enjoyable.

In conclusion I desire to thank the members of the Lancashire V.M.A. for sending me as their representative. G. H. Locke.

Mr. Sumner regretted to announce that he had been unable to attend the Congress of the Sanitary Institute at Bristol. Many matters had arisen in Liverpool in connection with the visit of the National Veterinary Association which required his personal attention, and consequently he had to ask them to excuse his inability to attend the Congress.

Whilst speaking of the visit to Liverpool by the National Veterinary Association, perhaps the meeting would allow him to refer to a matter which they had debated upon in regard to the social side of the visit, and the liability of the Lancashire V.M.A. in extending or co-operating in the formal invitation to the National Association to visit Liverpool. He was delighted to say that neither the funds of the Lancashire or Liverpool Societies were likely to be touched in the least degree.

A vote of thanks to Mr. G. H. Locke for his attendance as delegate, and for his report, was carried unanimously, being proposed by Mr. Wolstenholme and seconded by Mr. Garnett.

The meeting closed with a vote of thanks to the President, on the proposal of Mr. Taylor, seconded by Mr. Harrison.

METEOROLOGICAL CONDITIONS AND ENTERIC FEVER IN NATAL.

In the discussion of the causation of such a disease as enteric fever two sets of factors need consideration: those relating to the vehicle, whether water, milk, or other food, in which the contagion is conveyed, and those relating to the seasonal and climatic conditions which favour the occurrence and periodic recurrence of the disease. On the latter subject Dr. Watkins-Pitchford, the Assistant-Bacteriologist of the Natal Government, has published an interesting report illustrated by coloured plates. The seasonal incidence of enteric fever in Natal is peculiar in that it attains its maximum not in the late autumn and early winter, as in Great Britain and the United States, but in November and December, before the summer temperature has reached its maximum. Dr. Watkins-Pitchford argues with reason from this circumstance that the heat of summer cannot be an essential factor in the production of the "enteric season."

In this country it has been stated that the prevalence of enteric fever as well as that of diarrhœa is determined by the arrival of the 4-ft. earth thermometer at a temperature of 56° F. Dr. Watkins-Pitchford's figures show that the 4-ft. earth thermometer even in the depth of winter of 1904 did not fall below 57.2° F., and it may be inferred that the annual accession of enteric fever has no essential dependence upon any fixed soil temperature.

The charts bring out that the rainy season and the enteric season coincide, and that very heavy rains were followed by a rise in the notifications. This sequence of enteric fever upon the onset of heavy rains, Dr. Watkins-Pitchford points out, appears to occur also in England and the United States. On this point a comparison between Cairo and Pietermaritzburg is interesting. The average annual rainfall of the former is 1·18 in., of the latter 41.69 in. In Cairo, although the rainfall is so small, December and January are termed the rainy months, and enteric fever, according to Dr. Sandwith, is most rife in Cairo in January, February, and March. Thus in both places the rainy months immediately precede and coincide with the first part of the enteric season, and we may say that epidemic enteric fever "is usually a consequence of rainfall rather than that of any other meteorological condition."—*B.M.J.*

DISEASES OF ANIMALS ACTS 1894 TO 1903. SUMMARY OF RETURNS.

Period.		Anthrax.		Foot-and-Mouth Disease.		Glanders (including Farcy)		Rabies. Cases Confirmed.		Sheep Scab.	Swine Fever.	
		Out-breaks	Ani-mals.	Out-breaks	Ani-mals.	Out-breaks	Ani-mals.	Dogs.	Other	Out-breaks	Out-breaks.	Slaughtered *
GT. BRITAIN. Week ended Sept. 15		15	21			13	33			4	13	35
Corresponding week in	1905 ..	13	23			28	33			4	10	54
	1904 ..	21	28			26	50			5	14	93
	1903 ..	13	16			31	71			8	21	88
Total for 37 weeks, 1906		654	953			788	1485			306	809	4497
Corresponding period in	1905 ..	695	956			903	1548			665	620	2825
	1904 ..	707	1113			1127	2008			1077	1017	4708
	1903 ..	570	869			1087	1805			1193	1145	5810

Board of Agriculture and Fisheries, Sept. 18. 1906.

IRELAND. Week ended Sept. 8		..	.	..	..	..	..	..	..	3	1	29
Corresponding Week in	1905 ..	..	..	..	..	..	3	..	..	..	2	36
	1904 ..	1	1	..	..	1	1	..	..	1	9	212
	1903 ..	..	..	..	..	..	..	..	..	3	11	147
Total for 36 weeks, 1906		3	7	..	..	6	14	..	..	165	78	881
Corresponding period in	1905 ..	3	5	..	..	16	44	..	..	232	128	1293
	1904 ..	3	3	..	..	9	30	..	..	373	254	3306
	1903 ..	2	3	..	..	2	3	2	..	400	248	3024

Epizootic Lymphangitis: Week ending Jan. 27, 1906, 1 case.

Department of Agriculture and Technical Instruction for Ireland, (Castle Street), Dublin, Sept. 13, 1906.

NOTE.—The figures for the Current Year are approximate only. * As Diseased or Exposed to Infection

VIVISECTION ENQUIRY.

NAMES OF COMMISSIONERS AND TERMS OF ENQUIRY.

The Royal Commission on Vivisection, which the Government promised in May last, has now been appointed by the King, and the names of the Commissioners, together with the terms of reference, were published in *The London Gazette* of Sept. 18:

The Commissioners are to inquire into and report upon the practice of subjecting live animals to experiments, whether by vivisection or otherwise; and also to enquire into the law relating to that practice and its administration; and to report whether any, and if so what, changes are desirable.

The following are the Commissioners:—

WILLIAM COURT VISCOUNT SELBY.
As the Right Hon. W. C. Gully, represented Carlisle as a Liberal from 1886 till 1905, and was Speaker of the House of Commons from 1895 till 1905. As a barrister Lord Selby used to practice on the Northern Circuit. He took silk in 1887, and became a Bencher of the Inner Temple two years later.

Col. AMELIUS MARK LOCKWOOD, C.V.O., M.P.
Has represented the Epping Division of Essex as a Conservative since 1892. Col. Lockwood, who was formerly in the Coldstream Guards, is a strong anti-vivisectionist. He is one of the most popular men in the House of Commons, and is a personal friend of King Edward.

Sir WILLIAM SELBY CHURCH, Bart., C.B.
President of the Royal College of Physicians since 1899. Sir William was a member of the Royal Commission on the cure and treatment of the sick and wounded during the South African War, afterwards serving on the Boyal Commission on Arsenical Poisoning.

SIR JOHN M'FADYEAN,
The well-known Principal and Professor of Comparative Pathology at the Royal Veterinary College, Camden Town.

SIR WILLIAM JOB COLLINS, M.P.
Is renowned in the medical world, and was Chairman of the London County Council, 1897-98. He has already served on Royal Commissions, and sits in the House of Commons as Liberal Member for West St. Pancras.

MR. MACKENZIE DALZELL CHALMERS.
Is a barrister, and has been one of the Permanent Secretaries for the Home Department since 1903.

MR. ABEL JOHN RAM, K.C.,
Has been Recorder of Wolverhampton since 1900, and is Bencher of the Inner Temple.

MR. WALTER HOLBROOK GASKELL, M.D.
University lecturer in physiology at Cambridge since 1883. He is the author of a number of works on anatomy.

MR. JAMES TOMKINSON, M.P.
Liberal Member for Crewe since 1900. He is sixty-six years of age, and is hon. lieut.-colonel of the Earl of Chester's Imperial Yeomanry.

MR. GEORGE WILSON, M.D.

Mr. Charles Clive Bigham, C.M.G., has been appointed secretary of the Commission.

ETIOLOGY AND LIFE-HISTORY OF MALIGNANT NEW GROWTH.

At the meeting of the British Medical Association at Toronto, August 22nd, Section of Pathology and Bacteriology.

A discussion was opened by Dr. G. H. A. Clowes (New York State Cancer Laboratory, Buffalo), in a paper on Experimental Studies in Mouse Tumours. Most important results were obtained by the study of the action of chemical and physical agents on mouse tumours and evidence was detailed of spontaneous recovery from, and immunity against, mouse tumours. Data were presented regarding experiments carried out by Dr. Clowes and Professor Gaylord, the essential points brought out being as follows. Three main types of tumour had been employed: (1) "Jensen," showing 30 per cent. of successful inoculations with slow development and over 20 per cent. of spontaneous recoveries; (2) "Brooklyn" tumour, giving 90 per cent. yield, with rapid development and only 5 per cent. recoveries; and (3) "Springfield" tumour, which only gave tumours at start by incubation before transplantation and 30 per cent. recoveries. It was shown that tumour cells were far more resistant to chemicals than bacteria. Proof of immunity was afforded by the following points:—(1) Spontaneous recovery from true tumours occurs; (2) spontaneous recovery cases are not re-inoculable; (3) there are reduced yields on second and third inoculations; (4) mice with growing tumours fail to take on second inoculation at a different point in the body; and (5) action of serum of recovered mouse on small tumours and on cancer cells. It was shown that immunity was not conferred by injection of tumour cells killed by heat or by chemicals or by nucleo-proteids extracted from tumours. Ehrlich's recent theory of cancer was discussed and Dr. Clowes showed that the results of the later work of the New York Laboratory harmonised better with the theory of a stimulating virus. These results could not for the present be applied to human beings.

Dr. BASHFORD described the work of the Imperial Cancer Research Fund. In the mouse 28 spontaneous tumours had been transplanted with 25 per cent. success. The parenchyma of the tumour was the only part that grew on transplantation; the stroma never. Dr. Bashford dwelt upon the absence of any sharp distinction between expansive and infiltrative, or, in other words, simple and malignant growths. An investigation into the statistics of cancer incidence with the Registrar-General showed that there was no increase of cancer and no evidence of endemicity in cancer.

Professor H. R. GAYLORD (New York State Cancer Laboratory) contributed a valuable paper on the evidences that infected cages were the source of spontaneous cancer developing among small caged animals. He found in one year three cases of sarcoma of the rat in one cage in which had been previously kept rats with transplated sarcoma. There were eight rats exposed in the cage with three positive results. He located one cage in the establishment of a dealer from which in three years 66 spontaneous mouse tumours were found. During this time the stock was completely changed. Again, a second dealer found eight or nine cases of cancer in groups in separate small cages.

Professor EWING (New York) and Dr. S. P. BEEBE gave a preliminary report of a study of the action of salt solution, nucleo-proteid antiserum, susceptible blood, and immune blood upon the cells of the infectious lymphosarcoma of dogs. In some experiments the fluids were saturated with oxygen, in others with nitrogen, and finally in some the blood was changed every 12 hours. The best preservation of cells was obtained by charging the blood every 12 hours and saturating with oxygen, by which means a peripheral layer of cells about the tumour nodule was well preserved for at least 96 hours Susceptible blood formed a better preservative than immune blood. In salt solution the cells rapidly recovered. Atmospheres of nitrogen were comparatively unfavourable. The former tests were not concluded.

Professor SIMS WOODHEAD regretted that he had been unavoidably prevented from hearing the earlier papers on the subject and expressed diffidence in continuing the discussion. He was so much interested, however, in the later papers that he would make no further apology for intervening at this stage. The points that impressed him most were, first, the promise of further results from the fact that so large an amount of spontaneous tumour growth in mice could so easily be obtained, and, second, the importance of the work founded on the side-chain theory, as expounded by Ehrlich and his school. So far most of their efforts had been directed to clearing the ground and of removing many of those hampering traditions that cling round the question of cancer growth. It was hoped that greater attention might thus be centred on the real and prime factors in this very complex problem. With a large amount of material, during the collection of which some of the factors in the question might be solved, many of those questions as to the difference or likeness of structure and function between cancer cells and normal epithelial cells of various types might be gradually attacked. The specificity of antibodies and the relation of these antibodies to the cells might give us light as to the specificity of the cells. Minute differences in albumins in blood gave specific differences in the form of the antibodies and it remained for them to see whether there might not be equally minute but specific differences between cancer cells and normal epithelial cells. Along these lines they might through the study of function learn something of structure, and of structure learn something of the nature of the altered function of cancer cells.

Professor WILLIAM H. WELCH expressed great satisfaction in the opportunity of hearing these important subjects presented by those actually engaged in the researches on cancer. He expressed the view that the extraordinary observations reported by Dr. Clowes regarding the insusceptibility of cancer cells from tumours of mice to the action of strong germicides, such as corrosive sublimate, the cyanides, etc., could be explained only on the assumption that in some way the germicide was prevented from coming into actual contact with the living substance of the cells, and he referred to his observations on the influence of sublimate in cutaneous disinfection where this explanation applied. Prof. Welch called attention to the differences between spontaneous tumours of mice and of dogs, the latter being often complex and even teratomatous. As to the question of the unicentric origin of cancer in Ribbert's sense, the examination of beginning adeno carcinomata of the uterus in scrapings showed often cancerous metamorphosis of groups of cells over comparatively wide areas.

Dr. F. G. BUSHNELL (Brighton) summed up briefly his contribution to the discussion from his observations as a pathologist to a general hospital and expressed his appreciation of the work of those who had spoken and were devoting their lives to cancer research. One feature in the histological examination of normal and abnormal tissues stood out—viz., the continuity in structure which linked up normal and abnormal growth. An analogous condition was seen in metaplasia which occurred in carcinoma of the cervix uteri, in gastric carcinoma, and elsewhere. Thus a study of cancer resolved itself into a study of the laws of growth. This could be carried out from the point of view of (1) structure and of (2) function in biochemical terms. Personally Dr Bushnell had never yet found one single feature by which the departure of the cell from its specific maintenance of form and activities was to be detected.

Even heterotype mitoses which he carefully observed and recorded in 1902 were not essential to cancer structure. As illustrations of the linking-up of tissues were given that of the young trophoblast (chorion-epithelium) which had a striking power of growth, and in the early stages of the imbedding of the ovum had physiological relationships which were destructive to the boundary zone. Again, hydatid mole was an excessive proliferation of both layers of the chorionic epithelium. Malignant mole showed a little more over-growth of epithelium, some infiltration of the decidua and invasion of vessels, but histological distinction between simple and malignant mole might be absolutely impossible. The pure chorio-epithelioma might be made up entirely of epithelial tissue and might resemble a "mole" in this respect. The condition was an exaggeration of that of the normal attachment of villi to the decidua in the young placenta. Examples of simple growth becoming malignant were adduced, such as adenoma mammæ becoming carcinoma; melanotic papilloma cutis giving rise to diffuse malignant growth of liver; of a "callus" tumour of the humerus of osteoid tissue following fracture becoming a low type of sarcoma; of multilocular ovarian cysts derived from the follicular epithelium or from germinal cell down-growths in the ovary becoming malignant by an alteration of the distribution and arrangement of its epithelium cells; of fibromyoma uteri which became sarcomatous; and the various cell seclusions and teratomata which gave rise to neoplasms. The study of the functions and activities of cell life was indicated in cancer research. Granulation tissue could exhibit an erosive or malignant character of low or even high type, but it seems usually of a purposeful though sometimes of an apparently useless function. When the biochemical changes which resulted in granulation tissue were known they might expect to be on the line of the origin of malignant new growth. It was thus he hoped to work.—*The Lancet.*

THE PROFESSION OF MEDICINE.

The choice of a profession is the most momentous step in a man's life, for a mistake in regard to this matter can seldom be wholly rectified; and even if it does not wreck his career, it will prevent the complete fulfilment of the possibilities of achievement, for himself as well as for others, that lie in him. Nothing can be more disastrous than for a man to find himself, when it is too late to escape, condemned to a way of life which he dislikes or for which he secretly knows himself to be unfitted.

In considering the fitness of a young man or woman for the medical profession, the bodily constitution must be taken into account. The medical curriculum of the present day makes very serious demands on the physical stamina of the student. A vast number of things have to be learnt in a short time, the work of the dissecting room and hospital ward has often to be done under depressing conditions, and the spectre of examination follows the student everywhere like a shadow. When to this is added that opportunities for exercise are generally few, and the time that can be given to amusement or relaxation of any kind is scanty, it will be seen that a somewhat exceptional physique is required to carry the candidate for admission to the medical profession through the strenuous work and manifold worries of the modern student's life. The successful doctor is generally a man above the average in physical development; this is probably to be explained by the fact that he represents the survival of the fittest, the weaklings having succumbed to the stress of student life.

In regard to intellectual endowment, any man of average abilities can, with industry and adequate opportunities, gain admission to the medical profession. Without entering on the vexed question of the relative advantages of a classical and a "modern" education as a preliminary study, it may be stated generally that the broader and sounder the intellectual training a man brings to the study of medicine, the stronger will be his grasp of its principles, and the more free at once from "bookish theorick" and from rule of thumb will be his practice. The advantage to a medical practitioner of the mental culture that comes from a wide knowledge, not only of books but of men, cannot be overestimated.

Commercial Aspect of Medicine.

The profession of medicine is a path to fortune only for a few. This fact should be clearly recognised by all who think of adopting it as a career. It has the great advantage, however, that no practitioner who is willing and able to work need starve. The generations of men follow each other like the leaves of the forest. The eternal sea of birth and death ebbs and flows unceasingly, and wherever birth or death is taking place there is a sphere for the exercise of the knowledge and skil which are the means of livelihood of the medical practitioner. Few, indeed, there are who become what a business man would consider even moderately rich by the exercise of their profession. The average income of the British practitioner has been variously estimated at £200 to £400 a year, but a fairly successful man will earn from £500 to £1000. The pecuniary disadvantages of medicine as a profession are the long and costly period of training, and the more or less prolonged time of waiting after qualification before the practitioner can count upon anything like an adequate income. Then the working expenses—including house, carriage, and what may be called professional equipment—are so heavy in proportion to the gross income of a man in active practice that the chances of being able to save, even to the extent of the return of the capital expended in his education, are in a large proportion of cases slight; while reasonable provision for old age, after family expenses are met, is difficult and too often impossible. That which is the legitimate boast of the profession, but, from the financial point of view, one of its most serious drawbacks, is that the true doctor is working to reduce the incidence of disease in general, and is thus directly helping to destroy the sources of his income. It is the chief glory of the medical profession, however, that success in its pursuit is measured not by the money earned, but by the good done to our fellow men, and the quantity of new truths added to the sum of knowledge.

The Profession in its Intellectual Aspects.

That which distinguishes a liberal profession from a trade is that it is not a mere means of livelihood, but affords the fullest scope for the exercise of the highest intellectual powers. From the intellectual side there is no career which affords larger opportunities of intellectual achievement or greater pleasure in work for its own sake than the profession of medicine. The training that must now be gone through is in itself one of the best means of exercising and developing the highest faculties of the mind. Of all men doctors should be the farthest removed from superstition and bigotry. The constant contact with the grim realities of their practice tends to make them indifferent to the futilities and ineptitudes which occupy so large a space in minds destitute of scientific culture. They are concerned with things, not words; their aim is, in the words of Matthew Arnold, to see things as they really are, and they are in the happy position that their profession makes it necessary that they should aim at absolute

truth undisturbed by prejudice or false sentiment. All through the active life of practice the mind is kept healthy and vigorous by the exercise of the powers of observation, analysis, and judgment. A doctor who loves his work will find that it brings its own reward exceeding great.—*B.M.J.*

Deleterious Liquids or Substances.

ARTICLES SENT BY POST FOR MEDICAL EXAMINATION OR ANALYSIS.

Deleterious liquids or substances, though otherwise prohibited from transmission by post, may be sent for medical examination or analysis by a qualified medical practitioner or qualified veterinary surgeon to a laboratory or Institute, public or private, or to a medical practitioner or veterinary surgeon within the United Kingdom, by ordinary letter post, under the following conditions:—

Any such liquid or substance must be enclosed in a receptacle hermetically sealed, which receptacle must itself be placed in a strong wooden, leather, or metal case in such a way that it cannot shift about, and with a sufficient quantity of some absorbent material (such as saw-dust or cotton wool) so packed about the receptacle as absolutely to prevent any possible leakage from the package in the event of damage to the receptacle.

The packet so made up must be conspicuously marked "Fragile with care," and bear the words "Pathological Specimen," and also the signature and address of the medical practitioner or veterinary surgeon who sends it. The packet must on no account be sent by parcel post. Any packet of the kind found in the parcel post, or found in the letter post not packed and marked as directed, will be at once stopped and destroyed with all its wrappings and enclosures.

Any person who sends by post a deleterious liquid or substance for medical examination or analysis otherwise than as provided by these regulations is liable to prosecution.

It is recommended that if receptacles are supplied by a laboratory or institute to medical practitioners or veterinary surgeons, they should be submitted to the General Post Office, in order to ascertain whether they are regarded as complying with the regulations.

The Sheep Dipping Order in Yorkshire.

AN OFFICIAL EXPLANATION.

Some doubt having arisen as to the construction of the Sheep Dipping (North of England) Order of 1906, the Clerk of the East Riding County Council has, we understand, been in communication with the Board of Agriculture on the matter. It appears that, provided sheep exposed in any market within a sheep-dipping area are accompanied by a declaration signed by the owner, or some person authorised in writing by him, to the effect that, in the case of sheep which are to be moved before September 1st, they have been dipped since June 15th, and in the case of sheep to be moved after September 1st that they have been dipped since August 1st, there is nothing in the Order to prevent the use of Malton Market by East Riding farmers.

Horse Doctors Differ.

Differences of professional opinion prevailed at Dudley Police Court in a case in which William Frewtrell, of Bloxwich, in the employ of Messrs. G. W. Turner and Co., timber merchants, Walsall, was charged with ill-treating a horse. He was in charge of two horses attached to a load of timber. One of the horses jibbed going up Dudley Castle Hill, and a police officer had to get the assistance of two more horses to bring the load along. On being taken to a veterinary surgeon's, abrasions on either side of the withers were found, and it was in respect to this that the charge was brought.

Mr. Green, sen., and Mr. Green, jun., both veterinary surgeons, of Dudley, stated that the abrasions caused the animal pain, and that they had been there some little time.

Mr. Paley, veterinary surgeon, of Walsall, and Mr. Pickworth, veterinary surgeon, of Wednesbury, gave evidence directly opposite, declaring that the horse was not in pain, and that the abrasions must have been caused on the journey.

The magistrates eventually decided to examine the animal, and they came back into court convinced that the wounds were there before the horse started out on the day in question, and that it should not have been worked. A fine of 40s. and costs was inflicted.

Liability at Grazing

A case of considerable interest to agriculturists was recently heard by His Honour Judge Templar, at the Darlington County Court. The plaintiff, Mr. Alured Ussher Greer, sought to recover £30 damages from Mr. C. W. Dixon-Johnson for the loss of an eight-year-old mare, which was being pastured by Mr. J. Hughill, Sockburn. It was alleged that the defendant's servants, on the 3rd of June last year, wrongfully, and without the leave of the plaintiff, drove the mare out of the field in which she was grazing, and, in jumping back into the field, she fell, and broke her neck. It appeared from the evidence that a mare belonging to Mr. Greer was sent to Mr. Hughill's to be grazed, in company with a number of other horses, amongst which was a cream pony owned by the defendant. In attempting to catch this pony, Mr. Dixon-Johnson's men drove ten of the animals, including the pony and the plaintiff's mare, into an adjoining field, on the way to the fold-yard, three being left behind, and whilst the stud groom was attempting to round the latter up the mare jumped an iron railing or was pushed over by the other horses, and broke her neck.

Mr. Greer, the plaintiff, and his sister, gave evidence that they hunted the mare with the Hurworth and Bedale Hounds, and it was an excellent hunter. The day after the death of the mare, said Mr. Greer, he went over to see Mr. Dixon-Johnson, and told him that the cause of the death was the interference of his (the defendant's) men, and defendant seemed to agree that that was so, and seemed willing to meet him. He left Mr. Johnson with the suggestion that he should think the matter over, and was subsequently very much surprised to receive a letter repudiating responsibility. In cross-examination, Mr. Greer said that he did not know that it was the universal custom in the district for every man to catch his own horse or to drive all the horses in doing so.

Mr. Joseph Hughill said that the pony was a difficult one to catch, and the ordinary way would be to drive it together with its companions to the yard.

Mr. Christopher Middleton, Secretary of the Cleveland Chamber of Agriculture, and a well-known expert, said he considered it a most improper thing to take another man's horse out of the field in which it was.

Mr. Richard Booth, Secretary to the Bedale Hunt, said he usually sent some horses out to gait, and occasionally take some in. He should not allow anyone to interfere with horses in his field—not even one of the "gaiters." When he wanted to take a horse away he sent word to the man with whom it was being gaited, and then got him to help to get it out. The natural instinct of a horse being driven out of one field into another was to try and get back to its mates.

His Honour said he did not see what could justify the removal of the horses from one field to another without the consent of Mr. Hughill or anyone else. There must have been risk in such a proceeding, and he thought that there had been great want of care and forethought, the consequence of which was the accident. He considered that the stud groom had not used caution when he found that the mare had become excited and was galloping about the field. It was a most serious matter that he should deal with somebody else's horses in the way he had done. There was no custom that could possibly authorise such action, and, instead of taking every precaution, adequate means were not taken to prevent an accident. He did not think that Mr. Dixon-Johnson had any defence at all, and there would be judgment for the plaintiff for the amount claimed and the costs of the action.

The Heating of Stacks.

The common process of heating which is noticed when a quantity of hay, corn, or any other of the cereals is built firmly together in a stack or a rick usually proves itself a source of trouble, if not of loss, to farmers at this season of the year. Anxiety to push on with the farm work, or the dread of allowing a spell of favourable weather to pass before getting the crop into the haggard, are often the motives which urge the carting of the crop while it is as yet not fully saved, and liable to heat if put together or compressed in any quantity. On this account a consideration of the process which is referred to by the term "heating" may be of advantage and benefit in the more intelligent treatment of the grass and corn crops.

The term "heating" signifies the evolution of heat which may be very sensibly felt by any one who plunges his arm into the shoulder in an affected stack, or be visibly perceived by the vapoury cloud to be seen issuing from the top. This "heating" is in reality a form of "fermentation," but differs from true fermentation in this respect, that the latter term is chiefly confined to chemical changes effected through the action of micro-organisms or their products. The precise cause of the change which takes place in the compressed heap, and the considerable rise in temperature that accompanies it, was for a long time a subject of much speculation, and numerous theories were put forward by way of explanation. The idea that the work of bacteria accounted for the process met with considerable support and acceptance, but the researches of Messrs. Babcock and Russell, two American investigators who have contributed much to the modern development of scientific agriculture, completely set this aside; on the other hand, experimental observation went to show that in a simple physiological process, which depended on facts long recognised by botanists, lay the partial, if not the complete, explanation.

"The living plant cell is always carrying on the physiological process of *respiration*, a process quite similar to that in animals, and resulting in the use of oxygen, and the evolution of carbon dioxide. In this respiration carbohydrate bodies are used, with some albuminoids as well, and a certain amount of heat is evolved. Now the plant cells do not die when the plant is cut down, but continue for some considerable time to carry on this process of respiration. Cutting the plant to pieces appears, indeed, to increase temporarily rather than to decrease the respiratory changes. These may go on for several days until, indeed, the plant cells are fully dead."

From this account can be seen what takes place in the compressed heap; the cells of the plants are still living and breathing; oxygen they must have to carry on their functions; pressure has made a supply of this impossible, and hence to compensate for the external want, they oxidise a portion of their substance; now, this oxidisation, as all oxidisation, means an evolution of heat, and at the same time a giving off of carbon dioxide, So long as air is deprived and respiration continues heating proceeds, but once the compression is relieved and air is admitted, as the practical farmer knows, the process stops, and after a time the material may be put together again with impunity. From this explanation, it will be seen that the ultimate cause of heating is the fact that the grass or corn plants, as the case may be, are not sufficiently saved, and that the vital activities are too vigorous to admit of compression.

The saving of hay or corn or any green form of plant life is in reality a *dying* process; but it is also a *drying* process, and the latter precedes the former, inasmuch as the loss of moisture, increased by the action of sunshine and air, robs the individual cells of moisture, and this hastens the suspension of their respiratory functions. Once the drying process has gone far enough to check any further respirative activity, the plants are sufficiently killed to be put together safely; henceforth there will be no danger of heating; corn once killed may be carted to the stack wet with the morning dew, or, as we have often seen it, well damped by a passing shower, and yet no ill effects on its keeping in the stack followed. It is well to have this in mind: make sure that the plants have been sufficiently robbed of life by the drying effects of sun and rain; once this has been sufficiently proceeded with, the presence of a little dampness due to rain or dew need not be dreaded. To quote the recently expressed remarks of Professor McConnell: "The whole matter is a question of greenness and moisture; if the moisture is natural sap then there will be heating, if the moisture be derived from rain then mouldiness will be the result."—*The Farmers Gazette.*

The Skidding of Motor Omnibuses.

The London District Motor Omnibus Company (Limited), the owners of the "Arrow" motor omnibuses, were sued in the City of London Court on Friday by a carman named Callcott, of Hastings Street, Judd Street, for £50 damage done to his horse and van in a collision in Fulham Road. The motor omnibus, coming along on its wrong side of the road, ran into the plaintiff's van and then came into collision with a lamp post, which pulled it up. The driver had evidently lost control. He had been fined at Westminster Police Court for the damage to the lamp post, and the plaintiff's driver had been paid a guinea. Mr. E. Carpenter, for the defendants, said that the motor omnibus "skidded," owing to the greasy state of the road. There was, therefore, no liability upon the defendant company for the plaintiff's damage. They could not be responsible for such accidents. Mr. Frank Dodd, for the plaintiff, said the defendants must take as much care of a motor omnibus as they would have to take of a wild animal, knowing its propensities. If motor omnibuses were run under statutory powers, like railway trains, it might be different. The Acts of Parliament simply removed previous disabilities, but did not give statutory authority. That was a great difference. The defendant's driver and conductor said they were going slowly and cautiously, but owing to the state of the road motor omnibuses were skidding all over the place. The omnibus in question had "skidded" before. Judge Rentoul, K.C., held that the defendants were liable, and expressed the view that motor omnibuses in London generally went a great deal too fast. He awarded the plaintiff £13 and costs.—*The Times.*

At the Salisbury, Rhodesia, Agricultural Show held in June, two Shrophire rams entered by Messrs. William Cooper and Nephews (Cooper dip proprietors), Sandown Estate, near Bulawayo, succeeded in securing two first prizes, besides taking a special prize for the best ram on the show. The rams came from Messrs. Cooper's home flock. The judges remarked that in their opinion the Shropshire breed was the most suitable for the country.—*The Agricultural Journal* (Cape).

Personal.

Mr. HENRY C. WILKIE, F.R.C.V.S., has accepted an engagement with the Egyptian Government to lecture on the Infective diseases of Animals, and also on Histology, at the School of Veterinary Medicine, Cairo, until the School closes for the next summer vacation. Mr. Wilkie has been making a special study of the first subject at the Institute Pasteur, of Paris, from last November until March, and was working at Histology in M. Ranvier's laboratory at the College de France, Paris, from March until the end of July.

SHERROTT—TILT.—On September 15th, at St. Mary Magdalene's, Mortlake, by the Rev. Father Hogan, Joseph Charles, second son of Augustus John Sherrott, M.R.C.V.S., of Mortlake, to Mary Catherine Agnes, the younger daughter of Arthur Preston Tilt, of East Sheen.

CORRESPONDENCE.

ANTHRAX.

Sir,

I have only arrived back from my annual holiday and have not seen *The Record* until my return, when Mr. Garnett's letter was pointed out to me by Mr. Lindsay, my assistant, hence the delay. The report given by *The Daily Dispatch* was altogether wrong, and evidently written by someone ignorant of the facts. In the first place anthrax was not suspected by the police. I was only called in by the owner of the fourth animal as it appeared to be ailing. It died the same afternoon. I suspected anthrax and had it reported to the county police. The following morning, accompanied by the police inspector, I visited the premises and removed an ear, and had it forwarded to Dr. Delépine by the County Police Authorities for examination. A report was received the same night confirming my suspicions. I can assure Mr. Garnett that the police acted only under my instructions, and do so in all suspicious cases.—Yours truly,

ROBT. HERBERT, Vet. Inspector.

Rochdale, Sept. 13th.

THE POLICEMAN IN MEDICINE.

Sir,

As one of your respected correspondents once observed, life is not worth living unless we can have an occasional growl, and apparently you are not an exception to those who believe his remark to be correct.

Of late your desire to take up a fighting attitude on behalf of the kiddies of the veterinary profession has been painfully conspicuous by its absence, nevertheless, we will exhibit magnanimity and welcome you back to the ranks, where we venture to think you will find the atmosphere more congenial.

Your remarks in last week's editorial of *The Veterinary Record*, although somewhat tardy in their advent, are promising as far as they go; but if they had appeared at the time arguments were used in support of the universal employment of the policeman in veterinary medicine, they would have then carried proper weight.

Alas, it is not so, the leading men of the profession have let the opportunity pass like a ship in the night, they feared a discourteous reply to their protests.

Beyond a vague suggestion of an investigating Commission you do not point to any remedial means, you do not hint at any representation by the Council of the Royal College of Veterinary Surgeons, however, quixotic as such a course might seem.

We know the subject is now big with complexity, and argument is vain unless we are all of one mind.

Jevons says "Comparatively few terms have one single clear meaning, and one meaning only, and whenever two or more meanings are unconsciously confused together we inevitably commit a logical fallacy." Let us all have done with confused thinking, and let us act in unison.—I am, etc.

"SPECTATOR."

THE PREVENTION OF CORRUPTION BILL.

Sir,

The no doubt well-intentioned letter under the above heading signed "London Practitioner" has not yet received a reply, and it is not difficult to understand the reason.

I suppose that most of us would like to see the custom of giving commission to servants abolished, but the fact is that very many veterinary surgeons—in London at any rate, and probably in all large towns—would find it impossible to carry on their practices without it.

That is the present state of affairs, and it remains to be seen whether this Bill will alter it. Personally I do not think it will.

I expect that most of us will take the comparatively small risk of detection and prosecution, trust to the discretion of our allies in law-breaking, the coachmen, and cheerfully continue to contravene this Act when it becomes law. We shall consider that not remarkably professional course far preferable to facing the certain loss of income which would follow a refusal to comply with the requirements of the coachmen, who demand their percentage on our bills as their moral right—so the old order of things will go on unaltered. *The Pharmaceutical Journal* hails the Bill as "a splendid opportunity for giving a new and better tone to commercial life." It may be so—but are veterinary surgeons, as a body, the men to attempt to use it as such?—Yours faithfully,

"DIOGENES."

DR. GORDON STABLES' ADVICE.

Sir,

The enclosed may interest, amuse, or shock your readers:—

To CORRESPONDENTS.

"DOG ILL (F.W.H.).—Inflammation. Take the poor thing to a skilled vet., or send to Spratt's Sanatorium. Few vets. know much about dogs.—*The Fife Herald and Journal.*"

I should like to know how the opinion affects the *amour propre* of a profession clamouring for better recognition of its usefulness.

Is the opinion really due to the modesty which prevents the most of us, reasonably including the best, from writing popular columns.

Mightn't the local vet. be the most likely person in the district to know the specialist to send a case to, as I believe he will be the readiest to advise such proceeding?

With humility, I should say he is most likely to know whether it is worth while doing so, and the most capable to give temporary aid, such as a case diagnosed as "inflammation" most certainly required. Is there a skilled vet. in residence at Spratt's Sanatorium?

How beautifully final is the diagnosis "Inflammation!" Reminds me of the concession that had to be made to ignorant prejudice if one's services were to be had in respect, on cases where inflammatory action could with confidence remain unsuspected.—Yours truly,

"ARGAND."

THE BENEFITS OF SHEEP-DIPPING, by Capt. F. S. H. Baldrey.

COMMUNICATIONS AND PAPERS RECEIVED—Messrs. R. Herbert, J. J. Bell, H. Taylor, W. H. Blackburn. "Practitioner," "Spectator."

The Teesdale Mercury.